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ABSTRACT

This study was designed to determine if: (1) the amount of stress differs between regular and special education elementary teachers, and (2) self-concept acts to moderate the stress scores between the two groups. Subjects included 75 teachers in regular classrooms and 62 teachers in special education classrooms. The teachers responded to personal biographical questionnaires, the Hopkins Symptom Checklist (HSCL), the Teacher Occupational Stress Factor Questionnaire (TOSFQ), and the Wallace Self-Concept Scale (WSCS). These inventories were chosen on the basis of their representing the theoretical model used in the study, i.e., occupational stress is a function of personal symptoms of stress interacting with environmental sources of stress which are moderated by the individual's self-concept. A description is given of each of the measurement instruments and what it purports to measure. The data were analyzed using the general linear model form of the multivariate analysis of variance (MANOVA). This allowed for the combining of the dependent variables and independent classification variables into one analysis model. Some differences in stress between the two groups were identified, and self-concept was seen as moderating the differences. A discussion of the findings includes comparisons between the measurement models used in the study. A table and 20 references are included. (JD)

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TEACHER STRESS AND SELF-CONCEPT

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TEACHER STRESS AND SELF-CONCEPT

Gaylen R. Wallace and Sandra E. Kass

The research reported in this study was designed to (1) determine if the amount of stress differs between regular and special education elementary teachers and (2) determine if self-concept acts to moderate the stress scores between the two groups. The dependent variables were the five subscale scores (interpersonal sensitivity, obsessive obsessive compulsive, depression, anxiety and somatization) from the Hopkins Symptoms Check List (Derogatis, Lipman, Rickels, Uhlenhuth & Covi, 1974) and the five subscales (working with students, task overload, administrative concerns, relationships with teachers and financial security) from the Teacher Occupational Stress Factor Questionnaire (Moracco, Danford, & D'Arienze, 1982). The independent variables were type of classroom teacher (regular vs. special) and the total score on the Wallace Self-concept Scale (Wallace, 1984) where subjects were classified into high and low groups. As a guide for the study two research questions were posed.

1. Is there a significant difference between regular and special education teachers on personal symptoms of stress (five subscales of the HSCL) and environmental sources of stress (five subscales of the TOSFQ) when combined in a multivariate analysis of variance (MANOVA) analysis model?
2. Is there a significant difference between teachers who are classified into high vs. low self-concept groups on personal symptoms of stress (five subscales of the HSCL) and environmental sources of stress (five subscales of the TOSFQ) when combined in a MANOVA analysis model?

Theoretical Framework

Occupational stress among teachers is a growing concern in education. The existing literature includes studies that refer to teacher stress in one of two ways: either (a) as conditions in the teaching environment that are perceived as being overly demanding or threatening (Cichon & Koff, 1980; clark, 1980; Monacco, Danford & D'Arienzo, 1982), or (b) as a wide range of personal and emotional symptoms experienced by teachers (Kyriacou & Sutcliffe, 1978; 1979a; Parkay, 1980). However, Lazarus (1964) proposed a social-psychological theory of stress which incorporates both these ideas into one model. He proposes that stress is considered to be a circumstance external to the individual--a circumstance that makes excessive demands on or threatens the individual in some way and terms this type of situational demand a stress stimulus. Next, the stress stimulus produces disturbed reactions, which he calls stress reactions, which focus on the reaction of the individual rather than on the situation producing it. He points out that a comprehensive theory of stress should include both the stimulus variables within the environment and response variables within the individual.

In addition, Pealin, Liberman, Menaghan & Mullan (1981) propose that stress exhibited by individuals is not solely from the intensity of its sources but may be mediated by other life events, including the self-concept. They propose that diminished self-concept leaves a person vulnerable to experienceing symptoms of stress.

These two theoretical positions, taken together, became the framework for this particular research. That is, stress (in this case teacher related stress) is a function of personal symptoms and environmental sources of strain which is moderated by the self-concept.

Method and Data Source

Subjects

Subjects included in this study were 137 classroom teachers from eight school districts in a large midwestern metropolitan area. The teachers were selected from two naturally occurring groups; one group consisted of 75 elementary school teachers teaching in a regular classroom setting and the other group consisted of 62 elementary school teachers teaching in special education classroom settings. Ninty percent of the teachers were female and ten percent were male. The average age of all teachers was 37 years with an age range of 22 to 63 years. The regular teachers average age was 42 years with an age range of 22 to 63 years and the special education teachers average age was 32 years with a range of 23 to 63 years. The teachers averaged 12 years teaching experience with the regular teachers averaging 15 years and the special education teachers averaging eight years.

Procedures

Teachers from the participating districts were contacted by mail requesting their participation in the study. Of those contacted 147 agreed to participate in the study. These teachers were then asked to complete a personal biographical questionnaire and three standardized inventories; the Hopkin's Symptom Checklist (HSCL), the Teacher Occupational Stress Factor Questionnaire (TOSFQ) and the Wallace Self-Concept Scale (WSCS). There were 137 returns which were considered usable and provide the basis for this study.

Instruments

Standardized inventories were chosen on the basis of their representing the theoretical model used in the study, i.e., occupational stress is a function of personal symptoms of stress interacting with environmental sources of stress which are moderated by the individuals self-concept. The Hopkin's Symptom Checklist (Degrogatis, et al., 1974) is a measure which purports to measure

personal symptoms of stress. The HSCL is a 58 item Likert-type scale format which yields five subscale scores and a total score. The five subscales and their descriptions are:

Interpersonal Sensitivity (IS): Feelings of inferiority and the inability to relate to other people.

Obsessive Compulsive (OC): Painstaking worry about carelessness or sloppiness with difficulties in remembering or concentrating on things.

Depression (D): Feeling hopeless, lonely, suicidal with lack of energy, appetite or sexual interest.

Anxiety (A): Feelings of nervousness or fear accompanied by shakiness, perspiring, increased heart rate and/or dizziness.

Somatization (S): Various physical complaints, such as heart pounding, breathlessness, sore muscles, hot and cold spells, numbness, and ideas that something is wrong with one's body.

The HSCL is a well known clinical scale and has been widely used with a variety of populations (Derogotis, et al. 1974); Hesbacher, et al., 1980; Lipman, et al., (1972); McNair, et al., 1980). Coefficients of reliability range from .75 to .87 (Nunnally, 1967; Rickels, 1971) and coefficients of validity range from .87 to .97 (Derogatis et al., 1971; Lipman et al., 1966; Raskin et al., 1970).

The Teacher Occupational Stress Factor Questionnaire (Moracco, et al., 1982) is a scale which purports to measure stressful events in the teaching environment. The TOSFQ is a 30 item Likert-type scale format which yields five subscale scores and a total score. The five subscales and their descriptions are:

Working With Students (WS): Student discipline and teaching concerns such as trying to motivate students who do not want to learn.

Task Overload (TO): Work load concerns such as having to do school work at home to meet what is expected of one.

Administrative Concerns (AC): Lack of administrative support, absence of insight, little communication and insufficient recognition on the part of principals.

Relationships with Teachers (RT): How one interacts with their fellow teachers.

Financial Security (FS): Salaries are inadequate and not commensurate with responsibilities.

The TOSFQ was first developed by Clark (1980) and later modified by Moracco et al., (1982). This study uses the Moracco, et al. form of the TOSFQ. Factorial validity is reported as construct validity support (Clark, 1980; Moracco, et al., 1982). Coefficient of reliability ranges from .93 to .98 (Clark, 1980).

The Wallace Self-Concept Scale is a 15 item semantic differential type bipolar adjective scale designed to estimate the perception one holds toward the concept, "Myself As A Person" (Wallace, Spaner & Filer, 1984; White & Chan, 1983). The scale is a global measure of self-concept and yields a total score. Coefficients of reliability for test-retest range from .72 to .81 with a coefficient alpha of .81. Convergent validity correlations range from .45 to .64. Normative scales are available for adults, college students and adolscents.

Statistical Procedures

The data were analyzed using the general linear model form of the multivariate analysis of variance (MANOVA). This particular model is appropriate since it allows for the combining of the ten dependent variables (five subscales of the HSCL and afive subscales of the TOSFQ) and the two independent classification variables (type classroom teacher and high/low self-concept) into one analysis model. If the MANOVA model Wilks' lambda is significant then the GLM ANOVA was used as a test for between classification groups for significant differences on each of the dependent variables.

Results and Discussion

Research question one was answered by testing the null hypothesis that there was no effect due to type teacher (regular vs. special) across the ten stress variables (personal symptoms and environmental sources). The GLM MANOVA test of the hypothesis provided a Wilks' criterion lambda of .870, which when tested for significance yielded an F (9,127) = 2.11, p = .033. This significant F value provided the basis for applying the GLM ANOVA for between group differences (regular vs. special teachers). This test provided only one group difference, the TOSFQ subscale "adminsitrative concerns", F (1,135) = 4.34, p = .038.

Research question two was answered by testing the null hypothesis that there is no effect due to high/low self-concept, in addition to effect due to type teacher, across the ten stress variables. The GLM MANOVA test of hypothesis provided a Wilks' criterion lambda of .813, which when tested for significance yielded an F (9,127) = 3.25, p = .001. This significant F value provided the basis for applying the GLM ANOVA for between group differences (high/low self-concept). This test provided six significant group differences. They were, in order of the magnitude of difference: (1) the HSCL subscale "interpersonal sensitivity", F (1,135) = 14.70, p = .0002, (2) HSCL subscale "obsessive compulsive", F (1,135) = 10.68 p = .001, (3) TOSFQ subscale "working with students", F (1,135) = 9.38 p = .003, (4) HSCL subscale "depression", F (1,135) = 8.33, p = .005, (5) TOSFQ subscale "task overload", F (1,135) = 5.18, p = .024, (6) HSCL subscale "anxiety", F (1,135) = 4.10, p = .045. A test for interaction between the classification variables (type teacher and high/low self-concept) produced an insignificant F value. Therefore any differences between the classification variables and the dependent variables for research questions one and two are considered meaningful and not accounted for by interaction.

These results provide several additions to the research literature on teacher stress. First, although the research is mixed, most studies report differences in stress between type teacher with special education teachers showing the most stress (D'Alonzo & Wiseman, 1978; Morsink, et al., 1979; Weiskoph, 1980). However, only one variable, the TOFSQ "administrative concerns", discriminated significantly between type teacher. The mean scores indicated that special education teachers reported higher stress scores on this variable. Second, the self-concept scores did act to moderate the differences between type teacher. The analysis showed that the high/low self-concept variable produced six significant F value differences; four personal symptoms (HSCL interpersonal sensitivity, obsessive compulsive, depression and anxiety) and two environmental sources (working with students and task overload). The mean scores on all six of these variables indicated that special education teachers reported significantly more personal symptoms and environmental sources of stress than did regular teachers when the teachers self-concept is taken into account. Third, Lazarus (1964) theory does provide a more comprehensive view of the stress process by combining both response (personal symptoms) and stimulus (environmental sources) variables in the same framework. Fourth, Pealins' (1981) model proposing that self-concept may moderate stress is an important contribution to better understanding the stress process.

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Table 1

MANOVA and Univariate ANOVA for Teacher Stress and Type Teacher Effect With Self-concept as a Moderator Variable

	MANOVA				ANOVA		
Variables	Wilkes Criterion	F	df	p	F	df	p
Type Teacher (Regular vs Special)	.870	2.11	9,127	.033			
TOSFQ (A.C.)					4.34	1,135	.038
Self-concept (High/Low)	.813	3.25	9,127	.001			
HSCL (I.S.)					14.70	1,135	.0002
HSCL (O.C.)					10.68	1,135	.001
TOSFQ (W.S.)					9.38	1,135	.003
HSCL (D.)					8.33	1,135	.005
TOSFQ (T.O.)					5.18	1,135	.024
HSCL (A.)					4.10	1,135	.045

Note: HSCL refers to the Hopkins Symptom Checklist.
TOSFQ refers to the Teacher Occupational Stress Factor Questionnaire.